FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

U. S. Department of Energy

National Energy Technology Laboratory

Support Of Advanced Fossil Resource Utilization Research By Historically Black Colleges And Universities And Other Minority Institutions (HBCUs/OMIs)

Funding Opportunity Number: DE-PS26-08NT00198-00

Announcement Type: Initial

CFDA Number: 81.089 Fossil Energy Research and Development

Issue Date:	**04/04/2008**
Letter of Intent Due Date:	**Not Applicable**
Pre-Application Due Date:	**Not Applicable**
Application Due Date:	**06/05/2008 at 8:00:00 PM Eastern Time**

NOTE: NEW REQUIREMENTS FOR GRANTS.GOV

Where to Submit
Applications must be submitted through Grants.gov to be considered for award. You cannot submit an application through Grants.gov unless you are registered. Please read the registration requirements carefully and start the process immediately. Remember you have to update your CCR registration annually. If you have any questions about your registration, you should contact the Grants.gov Helpdesk at 1-800-518-4726 to verify that you are still registered in Grants.gov.

Registration Requirements
There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See http://www.grants.gov/GetStarted. Use the Grants.gov Organization Registration Checklist at http://www.grants.gov/assets/OrganizationRegCheck.pdf to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at least 21 days to complete these requirements. It is suggested that the process be started as soon as possible.

IMPORTANT NOTICE TO POTENTIAL APPLICANTS: When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e. Grants.gov registration).

Microsoft Vista and Office 2007 Compatibility

Grants.gov is currently incompatible with both the new Microsoft (MS) Vista Operating System and the new Microsoft (MS) Office 2007 versions of Word, Excel, and Power Point. In order to create and submit your application to Grants.gov, you must find a computer with a previous version Microsoft Operating System, such as Windows XP.

If you attach a file created using MS Office 2007, you will not get an error message when you submit the application, HOWEVER, your entire application will not be able to be processed or accepted at Grants.gov and will not reach DOE. Grants.gov can accept applications with attachments created in MS Office 2007 if the attachments are saved in the prior format. See the http://www.grants.gov/assets/Vista_and_office_07_Compatibility.pdf for detailed instructions on how to do this. A file created in MS Office 2007 can be identified by the "x" at the end of the file extension, for example "sample.docx" for a Word file. Contact Grants.gov at 1-800-518-4726 with any questions.

Questions
Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. Part VII of this announcement explains how to submit other questions to the U.S. Department of Energy (DOE).

Application Receipt Notices
After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five e-mails. It is extremely important that the AOR watch for and save each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2. When the AOR receives e-mail Number 5, it is their responsibility to follow the instructions in the e-mail to logon to IIPS and verify that their application was received by DOE. The titles of the five e-mails are:

Number 1 – Grants.gov Submission Receipt Number
Number 2 – Grants.gov Submission Validation Receipt for Application Number
Number 3 – Grants.gov Grantor Agency Retrieval Receipt for Application Number
Number 4 – Grants.gov Agency Tracking Number Assignment for Application Number

Number 5 – DOE e-Center Grant Application Received

The last email will contain instructions for the AOR to register with the DOE e-Center. If the AOR is already registered with the DOE e-Center, the title of the last email changes to:

Number 5 – DOE e-Center Grant Application Received and Matched

This email will contain the direct link to the application in IIPS. The AOR will need to enter their DOE e-Center user id and password to access the application.

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PART I – FUNDING OPPORTUNITY DESCRIPTION

1. BACKGROUND

This program was designed to raise the overall level of competitiveness of Historically Black Colleges and Universities and Other Minority Institutions HBCUs/OMIs) with other institutions in the field of fossil energy research; and to tap an under-utilized resource by increasing the number of opportunities in the area of science, engineering and technical management for HBCUs/OMIs.

2. STATUTORY AUTHORITY

The statutory authority for the HBCU/OMI Program is provided by Public Law 95-224, as amended by 97-258 and by Public Law 109-58 [Energy Policy Act (EPAct) 2005].

3. PURPOSE

This document illustrates the Department of Energy (DOE), National Energy Technology Laboratory's (NETL) strategy for evaluating and selecting applications in response to Funding Opportunity Announcement Number DE-PS26-08NT00198 entitled, "Support of Advanced Fossil Resource Conversion and Utilization Research by Historically Black Colleges and Universities and Other Minority Institutions (HBCUs/OMIs)."

Grants awarded under this program are intended to maintain and upgrade educational, training and research capabilities of HBCUs/OMIs in the fields of science and technology related to fossil energy resources. Project results will be used to further DOE's commitment to Fossil Energy research. The program will support two of DOE's business areas: Science and Technology, and Energy Resources.

4. OBJECTIVES

Fossil fuels (coal, oil, and gas) provide 85 percent of our energy in the United States. These fuels are key to our domestic economic growth and international competitiveness. While the energy industry is undergoing fundamental changes due to deregulation, environmental concerns and other factors, there are discernible trends for a vision of a future economy where electric energy, clean liquid fuels, natural gas, hydrogen and manufacturing will all be closely intertwined in a highly efficient, flexible economic system.

To broaden fossil resource and technology benefits to commerce and consumers, the Department of Energy's Office of Fossil Energy (DOE-FE) has initiated programs to enhance scientific and technical understanding of the processes involved in the conversion and utilization of fossil fuels. Technologies that are currently managed by DOE-FE include the following: Natural Gas Supply and Delivery Reliability; Oil Exploration and Production; Petroleum Fuels and Environmental Solutions; Gasification; Combustion; Distributed Generation; Advanced Research and Power Systems including Vision21 and FutureGen; Hydrogen; Syngas; Sequestration; and Advanced Turbines. The integrated program path leading to Advanced Power Systems also includes large-scale demonstration (Clean Coal Power Initiative) to establish a foundation for the next generation of technologies.

In order to develop and sustain a national program of university research in advanced technologies and fundamental fossil fuels studies, the DOE-FE is interested in providing assistance to develop and maintain a broad-based research infrastructure to provide educational and research training opportunities for tomorrow's scientists and engineers.

5. TECHNICAL TOPICS AND SUBTOPICS

This Funding Opportunity Announcement contains multiple program Technical Topics identified in the Funding Opportunity description. Applicants are cautioned that this Funding Opportunity Announcement is a Master Announcement and that each Technical Topic may contain subtopics and each Technical Topic or Subtopic has its own program-specific number for submission of applications. Applications cannot be submitted under any general Technical Topic that contains specific Subtopic areas.

For example, Technical Topic 2, Computational Energy Sciences, contains two distinct technical Subtopics:

Subtopic 2A: Multiphase Flow Research; and
Subtopic 2B: Process/Equipment Co-Simulation Advanced Fossil Energy Plants

Each technical Subtopic has a unique Funding Opportunity number (identified below) to which an application can be submitted. Applicants will not be able to submit an application directly to the general Technical Topics 2 or 3. All applications must be submitted to general Technical Topic 1 and specific technical Subtopics 2A, 2B, 3A or 3B. Applications cannot be submitted under the Master Announcement (DE-PS26-08NT00198-00). Please read the description of each Technical Topic and Subtopic below and submit your application under an appropriate Funding Opportunity number that best describes your application. Submission under an inappropriate Technical Topic or Subtopic may result in the rejection or lower rating of your application.

You may submit more than one application. Each application must have its own unique title on the subject line (i.e., project title and principal investigator/project director, if any).

Grant applications are sought in innovative research and development of advanced concepts pertinent to fossil fuel conversion and utilization under the following three (3) Technical Topics with related Subtopics, which are elaborated in this section:

TECHNICAL TOPIC 1 – SENSORS & CONTROLS

Novel Sensors for High Temperature Fossil Energy Applications		**DE-PS26-08NT00198-01**

TECHNICAL TOPIC 2 – COMPUTATIONAL ENERGY SCIENCES

Subtopic 2A:	Multiphase Flow Research	**DE-PS26-08NT00198-02A**
Subtopic 2B:	Process/Equipment Co-Simulation Advanced Fossil Energy Plants	**DE-PS26-08NT00198-02B**

TECHNICAL TOPIC 3 – ADVANCED MATERIALS

Subtopic 3A:	Computer-Aided Development of Materials	**DE-PS26-08NT00198-03A**
Subtopic 3B:	Novel New Materials for Energy Conversion from Coal	**DE-PS26-08NT00198-03B**

TECHNICAL TOPIC 1 – SENSORS & CONTROLS

Novel Sensors for High Temperature Fossil Energy Applications (DE-PS26-08NT00198-01)

Innovations are sought for the development of novel sensor materials and devices for the measurement of process parameters in high temperature (~500 ^{o}C) Fossil Energy (FE) applications. Innovations that capitalize on fundamental advancements at the micro and nano scales are important for the development of compact, powerful online analytical equipment thereby enhancing the control and performance of the entire power plant. For spectroscopic/optical devices, the areas of metamaterials, nano photonics, or highly specialized high temperature optical fibers are of interest to develop towards applications and conditions common to FE advanced near zero emission power systems. For micro sensors and other on

line analytical approaches, the development of high temperature devices (~500 ^{o}C) are of interest including the development of smart dust sensors / networks and highly integrated / embedded monitoring approaches for materials used in high temperature high pressure service. Applicants should clearly outline the innovative features of their research and offer a reasonable plan to develop the technology. In addition, Applicants should demonstrate an understanding of advanced power systems and how the novel technology may be used in a practical application.

TECHNICAL TOPIC 2 – COMPUTATIONAL ENERGY SCIENCES

SUBTOPIC 2A: MULTIPHASE FLOW RESEARCH (DE-PS26-08NT00198-02A)

Gas-solids flow is prevalent in fossil fuel processes, appearing in processes such as coal gasifiers. The volume fraction of solids can vary from low to high within a short length scale. The flows invariably span multiple time and length scales and pose enormous computational and experimental challenges. For example, the granular flow in a fluidized bed may range from incompressible to hypersonic, while the granular media may undergo a phase change similar to a gas-to-solid transition, all within the same reactor. The volume fraction, stress, and energy typically fluctuate spatially and temporally with amplitudes comparable to the mean. The interaction of the phases with boundaries is often complex and poorly understood. Because multiphase flows may not exhibit a clear separation among the spatial and temporal micro-, meso-, and macro- scales, advanced multiscale theories may be needed to analyze them. Therefore, it is a critical to understand and be able to model gas-solids systems for building highly efficient, near-zero emission fossil energy plants.

NETL is already funding research in areas of developing models for polydispersed systems, frictional flow regimes, and modeling of gasifiers and carbon capture devices. Applications are sought for conducting research in complimentary areas of gas-solids flow. Research work may be proposed in areas such as the development of theory and advanced computational models, gathering of experimental data from physical systems or molecular dynamics simulations, and the validation of the models. It is desired that the model development be based on the open-source gas-solids flow code MFIX developed by NETL.

Advanced diagnostics are needed for probing the fluid dynamics of solids and gas solids flow systems. Detailed information on solids and gas-solids flow structure is needed for validation of computational fluid dynamic (CFD) models. Diagnostics of interest include, but are not limited to, imaging of solids concentration, wall shear, local gas and solids velocities and concentrations (with up to 20% solids), and granular temperature. NETL has a large-scale, cold-flow, fluidization facility for development of novel measurement techniques and for generation of data for validating multiphase flow codes. This facility is highly instrumented for detailed data acquisition. It is desired that the advanced diagnostics development take advantage of this facility.

For background information on this subtopic please see “Report on Workshop on Multiphase Flow Research, Morgantown, WV, June 6-7, 2006,” ed. M. Syamlal, DOE/NETL-2007/1259, December 2006 available from http://www.netl.doe.gov/events/06conferences/mfr_workshop/Multiphase%20Workshop%20Report%206.pdf. Applicants are encouraged to discuss how the proposed work aligns with the objectives shown in the Technology Roadmap in the workshop report.

SUBTOPIC 2B: PROCESS/EQUIPMENT CO-SIMULATION ADVANCED FOSSIL ENERGY PLANTS (DE-PS26-08NT00198-02B)

The fossil energy industry faces the enormous challenge of designing next-generation plants to operate with increased efficiency and reduced emissions, while ensuring profitability amid changes in environmental regulations and fluctuations in the cost of raw materials, finished products, and energy. To achieve aggressive performance and economic objectives, significant advancements in process equipment technology must be conceived, analyzed, and optimized in the context of large-scale, complex, and highly-integrated process systems. Fundamental to designing a new plant or improving the

performance of an existing facility is an accurate virtual representation of the basic processes. Advanced modeling and simulation solutions are needed to foster rapid technology development, reducing pilot/demonstration-scale facility design time and operating campaigns, and lowering the cost and technical risk in realizing high-efficiency, near-zero emission plants of the future. Process simulation and computational fluid dynamics (CFD) software tools provide the solutions to meet this need, solving the critical engineering and operating problems that arise throughout the lifecycle of a plant. Process/CFD co-simulation enables better understanding and optimization of the coupled fluid flow, heat and mass transfer, and related phenomena that drive overall performance of advanced fossil energy plants. In addition, the optimization of individual equipment items using CFD is not done in isolation, but within the context of the overall process, so that a global improvement is achieved, especially for cases in which plant performance depends strongly on local mixing and fluid dynamics.

Applications are sought to develop process/equipment co-simulations of Chemical Looping systems based on CFD simulations of the advanced fuel and air reactors. Applications are also sought to develop process/equipment co-simulations of advanced carbon capture technologies that combine CFD simulations of carbon capture technology, for example, membrane separation equipment, together with process simulations of overall carbon capture systems. Applicants are encouraged to consider the Advanced Process Engineering Co-Simulator (APECS) for combining FLUENT® and/or COMSOL Multiphysics® CFD models with Aspen Plus® process simulations.

Process/CFD co-simulations may require excessive computation time, especially for cases in which one or more CFD models are embedded in the iterative flowsheet solution process. One promising solution is the use of reduced-order models (ROMs) that approximate the CFD-based equipment simulations, while keeping the computational cost manageable. Network-of-zones (multizonal) models are a class of ROMs where a CFD model of a single equipment item is represented by an interconnected network of models in the process simulator. In this case, the process simulator and CFD code model the same equipment item, but different physical phenomena. Applications are also sought to develop a multizonal process/CFD modeling approach for the simulation of advanced coal-fired entrained flow gasifiers. Strategies are required to analyze automatically the results from gasifier CFD simulations to generate systematically a network of interconnected reactor models in a process simulator. Applicants are encouraged to consider the FLUENT® and/or COMSOL Multiphysics® software packages for CFD modeling and the Aspen Custom Modeler® software for process simulation.

TECHNICAL TOPIC 3 – ADVANCED MATERIALS

SUBTOPIC 3A: COMPUTER-AIDED DEVELOPMENT OF MATERIALS (DE-PS26-08NT00198-03A)

Novel materials that can withstand high temperatures and extreme environments are dominant themes in materials development for efficient energy systems. Basic requirements are elevated melting temperatures, high oxidation and corrosion resistance, the ability to resist creep, and high toughness, and encompass some of the most challenging problems in materials science. An effective way to accelerate research in this field is to use advances in materials simulations and high performance computing and communications to guide experiments. This synergy between experiment and advanced materials modeling will significantly enhance the synthesis of novel high-temperature materials. Computer simulation to study the structure, properties, and processing of materials on the atomic scale is needed to speed the advancement of innovative strategies that would replace traditional, trial-and-error experimental methods, which are costly and time-consuming. A wide range of computer modeling tools, ranging from highly accurate quantum mechanics (electronic structure) methods to simple interatomic potentials and databases to support the models, could be brought to bear on addressing critical materials needs.

Grant applications are sought for the development of computational tools and simulations that will reliably predict properties of materials for fossil energy systems in advance of fabrication. The research should only address materials of interest to fossil energy conversion systems.

SUBTOPIC 3B: NOVEL NEW MATERIALS FOR ENERGY CONVERSION FROM COAL (DE-PS26-08NT00198-03B)

New materials ideas and concepts that stretch beyond the current state of the art are required to maximize energy extraction from the Nation's domestic resources of coal with minimal environmental impact, and to ensure the Nation's long-term energy security. Grant applications are sought for new material concepts in the following specific areas related to fossil energy systems: novel coating systems for thermal and/or environmental protection in advanced combustion systems; new structural materials for high-temperature applications that stretch beyond the capabilities of current-generation superalloys; new high-performance electrode and electrolyte materials for Solid Oxide Fuel Cells operating at temperatures between 600° and 850°C; new materials that improve system efficiencies through waste heat recovery; and novel membrane systems for oxygen, hydrogen, or carbon monoxide separations. Step improvements in the performance of existing materials are not the goal of this solicitation; rather the focus is on the development of new materials with high performance potential that have not been previously considered or identified for fossil energy applications. Reliability of performance, fabricability, and affordability are also key viability indicators for these new material concepts.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

DOE anticipates awarding grants under this program Announcement.

B. ESTIMATED FUNDING

Approximately $800,000 is expected to be available for new awards under this Announcement.

C. MAXIMUM AND MINIMUM AWARD SIZE

- Ceiling (i.e., the maximum amount for an individual award made under this Announcement): $ 200,000

- Floor (i.e., the minimum amount for an individual award made under this Announcement): $ 80,000

D. EXPECTED NUMBER OF AWARDS

DOE anticipates making four to six awards under this Announcement depending on the size of the awards.

E. ANTICIPATED AWARD SIZE

DOE anticipates that awards will be in the $80,000 to $200,000 range for the total project period.

F. PERIOD OF PERFORMANCE

DOE anticipates making awards that will run for one to three years.

G. TYPE OF APPLICATION

DOE will accept new applications under this Announcement.

PART III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS

In accordance with 10 CFR 600.6(b), eligibility for award is restricted to Historically Black Colleges and Universities or Other Minority Institutions (HBCUs/OMIs) as educational entities recognized by the Office of Civil Rights (OCR), U.S. Department of Education, and identified on the OCR's Department of Education U.S. accredited postsecondary minorities institution list (http://www.ed.gov/about/offices/list/ocr/edlite-minorityinst.html) in effect on the closing date of the program Announcement.

B. COST SHARING

Cost sharing is not required.

C. OTHER ELIGIBILITY REQUIREMENTS

1. Federally Funded Research and Development Center (FFRDC) Contractors are not eligible for an award nor can they participate as a team member in collaboration with any HBCU/OMI under this Announcement.

2. Applications must be submitted through Grants.gov by a qualified HBCU/OMI authorized representative. Applicants must be an HBCU/OMI as defined above.

3. Applications from university-affiliated research institutions must be submitted through the college or university with which they are affiliated.

4. The Principal Investigator and/or Co-Principal Investigator(s) (if applicable) must be teaching professors at an HBCU/OMI and a minimum of 30% of personnel time invoiced under the grant to pay for student assistance for each year of the grant.

5. The scope of work to be performed by subcontractors may not be more significant than the scope of work to be performed by the Applicant.

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE

Application forms and instructions are available at Grants.gov. To access these materials, go to http://www.grants.gov, select "Apply for Grants," and then select "Download Application Package." Enter the CFDA and/or the Funding Opportunity number located on the cover of this Announcement and then follow the prompts to download the application package.

B. LETTER OF INTENT AND PRE-APPLICATION

1. Letter of Intent.
Letters of Intent are not required.

2. Pre-application
Pre-applications are not required.

C. CONTENT AND FORM OF APPLICATION – 424 (R&R)

You must complete the mandatory forms and any applicable optional forms (e.g., Disclosure of Lobbying Activities (SF-LLL)) in accordance with the instructions on the forms and the additional instructions below. Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this Announcement.

1. SF 424 (R&R)

Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the "Help Mode" (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the DOE Financial Assistance Forms Page at http://management.energy.gov/business_doe/business_forms.htm under Certification and Assurances.

2. RESEARCH AND RELATED Other Project Information

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

Project Summary/Abstract (Field 6 on the Form)
The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the public. It should be a self-contained document that identifies the name of the Applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font not smaller than 11 point. To attach a Project Summary/Abstract, click "Add Attachment."

Project Narrative (Field 7 on the Form)
The project narrative **must not exceed 20 pages (double spaced)**, including cover page, table of contents, charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right). **EVALUATORS WILL ONLY REVIEW THE NUMBER OF PAGES SPECIFIED IN THE PRECEDING SENTENCE.** The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application, because the information contained in these sites will not be reviewed. See Part VIII.D for instructions on how to mark proprietary application information. To attach a Project Narrative, click "Add Attachment."

The project narrative must include:

- Project Objectives: This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.

- Merit Review Criterion Discussion: The section should be formatted to address each of the merit review criterion and sub-criterion listed in Part V.A. Provide sufficient information so that reviewers will be able to evaluate the application in accordance with these merit review criteria. DOE WILL EVALUATE AND CONSIDER ONLY THOSE APPLICATIONS THAT ADDRESS SEPARATELY EACH OF THE MERIT REVIEW CRITERION AND SUB-CRITERION.

- Relevance and Outcomes/Impacts: This section should explain the relevance of the effort to the objectives in the program announcement and the expected outcomes and/or impacts.

- Roles of Participants: For multi-organizational or multi-investigator projects, describe the roles and the work to be performed by each participant/investigator, business agreements between the Applicant and participants, and how the various efforts will be integrated and managed.

- Multiple Principal Investigators: The Applicant, whether a single organization or team/partnership/consortium, must indicate if the project will include multiple PIs. This decision is solely the responsibility of the Applicant.

  If multiple PIs will be designated, the application must identify the Contact PI/Project Coordinator and provide a "Coordination and Management Plan" that describes the organization structure of the project as it pertains to the designation of multiple PIs.

  This plan should, at a minimum, include:

  - process for making decisions on scientific/technical direction;
  - publications;
  - intellectual property issues;
  - communication plans;
  - procedures for resolving conflicts; and
  - PIs' roles and administrative, technical, and scientific responsibilities for the project.

- Facilities And Other Resources: Identify the facilities (e.g., office, laboratory, computer, etc.) to be used at each performance site listed and, if appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Provide any information describing the other resources

available to the project such as machine and electronics shops.

- Equipment: List important items of equipment already available for this project and, if appropriate, note the location and pertinent capabilities of each. If you are proposing to acquire equipment, describe comparable equipment, if any, already at your organization and explain why it cannot be used.

- Bibliography And References, If Applicable: Provide a bibliography for any references cited in the Project Narrative section. This section must include only bibliographic citations.

- Statement Of Project Objectives (SOPO):
  The Department of Energy's, National Energy Technology Laboratory uses a specific format, identified below, for the Statement of Project Objectives in its awards. In Announcements such as this one, where the Government does not provide a Statement of Project Objectives, the Applicant is to provide one, which will then be included in the award.

  The project narrative must contain a single, detailed Statement of Project Objectives that addresses how the project objectives will be met. The Statement of Project Objectives must contain a clear, concise description of all activities to be completed during project performance and follow the structure discussed below. The Statement of Project Objectives may be released to the public by DOE in whole or in part at any time. It is therefore required that it shall not contain proprietary or confidential business information.

  The Statement of Project Objectives is generally less than 10 pages in total (**and will be counted as part of the 20 page limitation on the project narrative**) for the proposed work. Applicants shall prepare the Statement of Project Objectives in the following format:

  TITLE OF WORK TO BE PERFORMED

  (Insert the title of work to be performed. Be concise and descriptive.)

  A. OBJECTIVES

  Include one paragraph on the overall objective(s) of the work. Also, include objective(s) for each phase of the work.

  B. SCOPE OF WORK

  This section should not exceed one-half page and should summarize the effort and approach to achieve the objective(s) of the work for each Phase.

  C. TASKS TO BE PERFORMED

  Tasks, concisely written, should be provided in a logical sequence and should be divided into the phases of the project, as appropriate. This section provides a brief summary of the planned approach to this project. An outline of the Project Management Plan (referenced in Task 1.0 below and required to be submitted with your application) is provided later in this Part.

  PHASE I

  Task 1.0 – Project Management and Planning

(Description includes work elements required to revise and maintain the Project Management Plan and to manage and report on activities in accordance with the plan)

Subtask 1.1

(Description)

Task 2.0 - (Title)

PHASE II (Optional)

Task 3.0 - (Title)

D. DELIVERABLES

The periodic, topical, and final reports shall be submitted in accordance with the attached "Federal Assistance Reporting Checklist" and the instructions accompanying the checklist.

[Note: The Recipient shall provide a list of deliverables other than those identified on the "Federal Assistance Reporting Checklist" that will be delivered. These reports shall also be identified within the text of the Statement of Project Objectives. See the following examples:

1. Task 1.1 - (Report Description)

2. Task 2.2 - (Report Description)

E. BRIEFINGS/TECHNICAL PRESENTATIONS (If applicable)

The Recipient shall prepare detailed briefings for presentation to the Project Officer at the Project Officer's facility located in Pittsburgh, PA or Morgantown, WV. Briefings shall be given by the Recipient to explain the plans, progress, and results of the technical effort.

The Recipient shall provide and present a technical paper(s) at the DOE/NETL Annual Contractor's Review Meeting to be held at the NETL facility located in Pittsburgh, PA or Morgantown, WV.

(END OF STATEMENT OF PROJECT OBJECTIVES)

- Project Performance Site:
  Indicate the primary site where the work will be performed. If a portion of the work will be performed at any other sites, identify those sites, also.

- Bibliography & References Cited Appendix:
  Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in field 8. This appendix **will not count** in the project narrative page limitation.

- Facilities & Other Resources Appendix:
  This information is used to assess the capability of the organizational resources, including subawardee resources, available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical, and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Describe only those resources that are directly applicable to the proposed work. Describe other resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. In order to reduce the number of files attached to your application, please provide the Facility and Other Resource information as an appendix to your project narrative. Do not attach a file in field 9. This appendix **will not count** in the project narrative page limitation.

- Equipment Appendix:
  List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. In order to reduce the number of files attached to your application, please provide the Equipment information as an appendix to your project narrative. Do not attach a file in field 10. This appendix **will not count** in the project narrative page limitation.

Other Attachments (Field 11 on the form):
If you need to elaborate on your responses to questions 1-5 on the "Other Project Information" document, attach a file in field 11.

Also, attach the following files:

Project Management Plan.

This plan should be formatted to include the following sections with each section to include the information as described below:

A. Executive Summary: Provide a description of the project that includes the objective, project goals, and expected results. For purposes of the application, this information has been required as part of the Project Narrative (Field 7) (bullet 1: Project Objectives and bullet 3: Relevance and Outcomes/Impacts) and the information contained under each bullet should be simply copied to the Project Management Plan document for completeness, so that the Project Management Plan is a stand-alone document.

B. Risk Management: Provide a summary description of the proposed approach to identify, analyze, and respond to perceived risks associated with the proposed project. Project risk events are uncertain future events that, if realized, impact the success of the project. As a minimum, include the initial identification of significant technical, resource, and management issues that have the potential to impede project progress and strategies to minimize impacts from those issues.

C. Milestone Log: Provide 2 milestones for each year of the project. Each milestone should include a title and planned completion date. Milestones should be quantitative and show progress toward budget period and/or project goals.

[Note: During project performance, the Recipient will report the Milestone Status as part of the required quarterly Progress Report as prescribed under Attachment 4, Reporting Requirements Checklist. The Milestone Status will present actual performance in comparison with Milestone Log, and include:

(1) the **actual** status and progress of the project,

(2) specific progress made toward achieving the project's milestones, and,

(3) any proposed changes in the project's schedule required to complete milestones.]

D. Funding and Costing Profile: Provide a table (the Project Funding Profile) that shows, by quarter, the amount of government funding going to each project team member. Also, provide a table (the Project Costing Profile) that projects, by quarter, the expenditure of government funds for the duration of the project.

E. Project Timeline: Provide a timeline of the project (similar to a Gantt chart) broken down by each task and subtask, as described in the Statement of Project Objectives. The timeline should include for each task, a start date, and end date. The timeline should show interdependencies between tasks and include the milestones that are identified in the Milestone Log (Section C).

[Note: As the first task in the Statement of Project Objectives, successful Applicants will revise the version of the Project Management Plan that is submitted with their applications by including details from the negotiation process. This Project Management Plan will be updated by the Recipient as the project progresses, and the Recipient must use this plan to report schedule and budget variances.]

Save this plan in a single file named "pmp.pdf" and click on "Add Attachments" in Field 11 to attach.

Commitment Letters from Third Parties Contributing to Cost Sharing
If a third party, (i.e., a party other than the organization submitting the application) proposes to provide all or part of the required cost sharing, the Applicant must include a letter from the third party stating that it is committed to providing a specific minimum dollar amount of cost sharing. The letter should also identify the proposed cost sharing (e.g., cash, services, and/or property) to be contributed. Letters must be signed by the person authorized to commit the expenditure of funds by the entity and be provided in a PDF format. Save this information in a single file named "CLTP.pdf" and click on "Add Attachments" in Field 11 to attach.

3. RESEARCH AND RELATED Senior/Key Person

Complete this form before the Budget form to populate data on the Budget form. Beginning with the PD/PI, provide a profile for each senior/key person proposed. A senior/key person is any individual who contributes in a substantive, measurable way to the scientific/technical development or execution of the project, whether or not a salary is proposed for this individual. Subawardees and consultants must be included if they meet this definition. For each senior/key person provide:

Biographical Sketch.
Complete a biographical sketch for each senior/key person and attach to the "Attach Biographical Sketch" field in each profile. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

Education and Training: Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

Research and Professional Experience: Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

Publications: Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in

which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights, and software systems developed may be provided in addition to or substituted for publications.

Synergistic Activities: List no more than 5 professional and scholarly activities related to the effort proposed.

Current and Pending Support

Provide a list of all current and pending support (both Federal and non-Federal) for the Project Director/Principal Investigator(s) (PD/PI) and senior/key persons, including subawardees, for ongoing projects and pending applications. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person-months per year to be devoted to the project by the senior/key person. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review. Save the information in a separate file and attach to the "Attach Current and Pending Support" field in each profile.

4. RESEARCH AND RELATED BUDGET (TOTAL FED + NON-FED)

Complete the Research and Related Budget (Total Fed & Non-Fed) form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV. G).

Budget Justification (Field K on the form).

Provide the required supporting information for the following costs (See R&R instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. If cost sharing is required, provide an explanation of the source, nature, amount, and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

5. R&R SUBAWARD (TOTAL FED + NON-FED) FORM

Budgets for Subawardees, other than DOE FFRDC Contractors. You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than $100,000 or 50 percent of the total work effort (whichever is less). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET (Total Fed + Non-Fed) FORM and e-mail it to each subawardee that is required to submit a separate budget. After the Subawardee has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name as the file name.

6. Disclosure of Lobbying Activities (SF-LLL)

If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an

employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

Name of Document	Format	Attach to
SF 424 (R&R)	Form	N/A
RESEARCH AND RELATED Other Project Information	Form	N/A
Project Summary/Abstract	PDF	Field 6
Project Narrative, including required appendices	PDF	Field 7
Project Management Plan	PDF	Field 11
Commitment Letters from Third Parties	PDF	Field 11
RESEARCH & RELATED SENIOR/KEY PERSON	Form	N/A
Biographical Sketch	PDF	Attach to appropriate block
Current and Pending Support	PDF	Attach to appropriate block
RESEARCH AND RELATED BUDGET (Total Fed + Non-Fed)	Form	N/A
Budget Justification	PDF	Field K
R&R SUBAWARD BUDGET (Total Fed + Non-Fed) ATTACHMENT(S) FORM, if applicable	Form	N/A
SF-LLL Disclosure of Lobbying Activities, if applicable	Form	N/A

D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

If selected for award, DOE reserves the right to request additional or clarifying information for any reason deemed necessary, including, but not limited to:

- Indirect cost information
- Other budget information
- Name and phone number of the Designated Responsible Employee for complying with national policies prohibiting discrimination (See 10 CFR 1040.5)
- Representation of Limited Rights Data and Restricted Software, if applicable
- Environmental Questionnaire (located at http://www.netl.doe.gov/business/forms/451_1-1-3.doc)

E. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

Pre-applications are not required.

2. Application Due Date

Applications **shall be received by Thursday, June 5, 2008, not later than 8:00 PM Eastern Time.** You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

F. INTERGOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

G. FUNDING RESTRICTIONS

Cost Principles: Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR Part 600. The cost principles for commercial organization are in FAR Part 31.

Pre-award Costs: Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR Part 600. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the Applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the Applicant does not receive an award or if the award is made for a lesser amount than the Applicant expected.

H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit

APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD. Submit electronic applications through the "Apply for Grants" function at www.Grants.gov. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@grants.gov.

2. Registration Process

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See www.grants.gov/GetStarted). **We recommend that you start this process at least three weeks before the application due date**. It may take 21 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at http://www.grants.gov/assets/OrganizationRegCheck.pdf to guide you through the process. IMPORTANT: During the CCR registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called "Marketing Partner identification Number" (MPIN). When you have completed the process, you should call the Grants.gov Helpdesk at 1-800-518-4726 to verify that you have completed the final step (i.e., Grants.gov registration).

3. Application Receipt Notices

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of five e-mails. It is extremely important that the AOR watch for and save each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2. When the AOR receives email Number 5, it is their responsibility to follow the instructions in the email to logon to IIPS and verify that their application was received by DOE. You will need the Submission Receipt Number (email Number 1) to track a submission. The titles of the five e-mails are:

Number 1 - Grants.gov Submission Receipt Number
Number 2 - Grants.gov Submission Validation Receipt for Application Number
Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number
Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number
Number 5 - DOE e-Center Grant Application Received

The last email will contain instructions for the AOR to register with the DOE e-Center. If the AOR is already registered with the DOE e-Center, the title of the last email changes to:

Number 5 – DOE e-Center Grant Application Received and Matched

This email will contain the direct link to the application in IIPS. The AOR will need to enter their DOE e-Center user id and password to access the application.

PART V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria

Prior to a comprehensive merit evaluation, DOE will perform an initial review to determine that (1) the Applicant is eligible for an award; (2) the information required by the announcement has been submitted; (3) all mandatory requirements are satisfied; and (4) the proposed project is responsive to the objectives of the Funding Opportunity Announcement.

2. Merit Review Criteria

Applications submitted in response to this Funding Opportunity will be evaluated and scored in accordance with the criteria and weights listed below:

Criterion 1 – Scientific and Technological Merit – 45%

- The research presents a significant contribution to expanding the base of knowledge in the defined focus area.
- Innovative approaches and solutions are proposed with routine data collection using proven techniques specifically discouraged.
- An awareness of the state-of-the-art in related areas of coal research is demonstrated.

Criterion 2 –State Objectives and the Probability of Achieving Them – 40%

- Clearly addresses a problem, concept or question described within the focus area.
- A well-defined, logical statement of work is provided to effectively address the technical issues.
- An approach is described that is scientifically sound, well planned, and current methods are used in the investigation

Criterion 3 – Technical and Management Capabilities – 10%

- Demonstrated capability and experience of the Applicant and its participating organizations in managing projects that meet project objectives, within budget and on schedule.
- Clarity, logic and effectiveness of project organizations, including subawardees, to successfully complete the project.
- Credentials, capabilities and experience of key personnel.

Criterion 4 – Facilities Capabilities – 5%

- Adequacy and availability of proposed facilities and equipment to perform the project tasks.

3. Other Selection Factors

The Selection Official will consider the following program policy factors in the selection process:

1. It is desirable to select for award a group of projects which represents a diversity of technical approaches and methods;

2. It may be desirable to support complementary and/or duplicative efforts or projects, which, when taken together, will best achieve the research goals and objectives;

3. It is desirable that different kinds and sizes of organizations be selected for award in order to provide a balanced programmatic effort and a variety of different technical perspectives;

4. It is desirable, because of the nature of the energy source, the type of projects envisioned, or limitations of past efforts, to select for award a group of projects with a broad or specific geographic distribution.

B. REVIEW AND SELECTION PROCESS

1. Merit Review

Applications that pass the initial review will be subjected to a merit review in accordance with the guidance provided in the "Department of Energy Merit Review Guide for Financial Assistance and Unsolicited Proposals." This guide is available under Financial Assistance, Regulations and Guidance at http://www.management.energy.gov/documents/meritrev.pdf.

2. Selection

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

3. Discussions and Award

The Government may enter into discussions with a selected Applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the Applicant.

C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES

DOE anticipates notifying Applicants selected for award by the fourth quarter of FY08 and making awards by the second quarter of FY09.

PART VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Selection

DOE will notify Applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

2. Notice of Award

A Notice of Financial Assistance Award issued by the Contracting Officer is the authorizing award document. It normally includes either as an attachment or by reference: (1) Special Terms and Conditions; (2) Applicable program regulations, if any; (3) Application as approved by DOE; (4) DOE assistance regulations at 10 CFR part 600, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; (5) National Policy Assurances To Be Incorporated As Award Terms; (6) Budget Summary; and (7) Federal Assistance Reporting Checklist, which identifies the reporting requirements.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. Administrative Requirements

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR Part 600 (See: http://ecfr.gpoaccess.gov), except for grants and cooperative agreements made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at http://www.nsf.gov/awards/managing/fed_dem_part.jsp.

2. Special Terms and Conditions and National Policy Requirements

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at http://management.energy.gov/business_doe/business_forms.htm.

The National Policy Assurances To Be Incorporated As Award Terms are located at DOE http://management.energy.gov/business_doe/business_forms.htm.

3. Intellectual Property Provisions

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at http://www.gc.doe.gov/financial_assistance_awards.htm.

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement. See the NETL Business Page at http://www.netl.doe.gov/business/forms/FederalAssistanceReportingChecklistExample.pdf for the proposed Checklist for this program**.**

PART VII - QUESTIONS/AGENCY CONTACTS

A. QUESTIONS

Questions regarding the content of the Announcement must be submitted through the "Submit Question" feature of the DOE Industry Interactive Procurement System (IIPS) at http://e-center.doe.gov. Locate the program announcement on IIPS and then click on the "Submit Question" button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or support@grants.gov. DOE cannot answer these questions.

B. AGENCY CONTACT

Name: Robyn L. McKee
E-mail: Robyn.McKee@netl.doe.gov

PART VIII - OTHER INFORMATION

A. MODIFICATIONS

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE

DOE reserves the right, without qualification, to reject any or all applications received in response to this Announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

D. PROPRIETARY APPLICATION INFORMATION

Patentable ideas, trade secrets, proprietary or confidentional commercial or financial information, disclosure of which may harm the Applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the Applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

"The data contained in pages _____ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this Applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the Applicant."

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

"The following contains proprietary information that (name of Applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The Applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See "Notice of Right to Request Patent Waiver" in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE's own needs or to insure the commercialization of technology developed under a DOE agreement.

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES

Eligible activities under this program include those, which describe and promote the understanding of scientific and technical aspects of specific energy technologies, but not those which encourage or support political activities such as the collection and dissemination of information related to potential, planned or pending legislation.